Nay, Frank
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RAILWAY ACCOUNTING UNDER FEDERAL REQUIREMENTS

BY FRANK NAY
Comptroller, Rock Island Lines

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Railway accounting consists in the combining, assembling and classifying of the hundreds of thousands of transactions of a railway company monthly, into a condensed statement which shall exhibit to the executive officers of the railway and to others interested the assets and liabilities of the company, and the income account. In theory, the matter is quite simple, but in practice it is complicated because of the large volume of transactions and the diversified character of the transactions. On one railroad, which is probably a fair sample of the larger railroads of the country, this data must be gathered from 1,500 foremen of section gangs and extra gangs, more than 1,000 station agents for both freight and passenger traffic, more than 1,000 conductors of freight and passenger trains, hundreds of foremen of shop gangs, bridge gangs, building gangs, telegraph line repair gangs; in fact, it will cause but a moment's reflection by you men of experience to realize the vast multitude of items that must be classified and gathered from all parts of a railroad into one simple statement which will reflect the financial condition of the company, and the result of its operation. However numerous these items may be, they affect but three general divisions of the accounts; viz., assets, liabilities, and the income account. The balance of income is finally carried to the balance sheet which exhibits the assets on one side and the liabilities on the other. Therefore, when an item comes before us for classification, we consciously or unconsciously classify it as affecting an asset, a liability, or the income account. Of course, we have a variety of details in the classification of the

assets, also of the liabilities and the income account. After it is assigned to one of the three general divisions, it then must be assigned to its appropriate subdivision of one of these three. The Interstate Commerce Commission has prescribed a form of general balance sheet which means a classification of the assets and liabilities,—this is in addition to its ten other classifications.

If an item is thrown in the wrong class at the start, you will realize that the accounts are mis-stated until correction is made, and then if the correction is made in the month subsequent to that in which it is incurred, it is necessary to purposely cause a misstatement of the account for the month in which the correction is made, because we must inject into that month this correction which has nothing to do with the business of that month. Therefore, it will be understood how important it is that all items shall be properly and correctly classified in the first instance. The accounting officer of a railroad has no small task to perform the duties of seeing to it that all of these innumerable items are properly classified and combined into the final statement presented to the executive officers. I know from bitter experience that when errors are found in that statement, the accounting officer is the first man "on the carpet." Some of you operating men who think the accounting officer is a grouch, would form a better opinion of him if you knew that he only passed along to you the kicks which he receives from his superior, when an error is found in one of the statements. However, I take it from the subject which was given to me, and which appears at the head of this paper, that it was not expected that this paper should deal with the details of railway accounts in general, but that it should deal particularly with the problems of federal requirements and their application to the accounts with which the operating men come in contact.

First, a few words about the Acts of Congress which caused the problems which we are to discuss tonight. The accounting problems resulting from federal requirements began first in 1887, when by Act of Congress, the pooling of traffic was pro-

hibited and the Interstate Commerce Commission was created. At that time the writer of this paper was pool clerk on the old Cotton Belt Railroad, and having taken a wife in December, 1886, the prospect of being thrown out of work by the abolition of railroad pools, presented a big personal problem with which the operating men did not come in contact. The twentieth section of the same act required annual reports from common carriers to the Interstate Commerce Commission. Shortly after the passage of this act, a number of accounting officers met with the Auditor of the Interstate Commerce Commission and assisted in the formulation of the annual report that was afterwards required. The compilation of an annual report obviously meant classifications, arrangement, etc. From time to time, subsequently, the Interstate Commerce Commission promulgated requirements with respect to the accounts of the carriers, and additional data called for in their annual report.

The Association of American Railway Accounting Officers, which sprang into existence in 1887, has always co-operated with the Interstate Commerce Commission and that co-operation has been appreciated. For many years prior to and since the passage of the Hepburn Act, the Accounting Officers invited representatives of the Interstate Commerce Commission to meet with them in their annual conventions, where they were accorded the privilege of the floor, and in that way, the Accounting Officers all over the United States formed an acquaintance with those representatives which has been helpful all through the years, to a better understanding between the Railway Accounting Officers and the accounting representatives of the Interstate Commerce Commission.

Prior to the passage of the Interstate Commerce Act in 1887, besides the pooling of freight the railroads had paid rebates to large shippers, against which there was no law at that time. The pooling of freight was a plan of the railroads to avoid the payment of rebates; as, for example, one pool that is recalled is that of the Texas Traffic Association, which provided that each

railroad operating in the State of Texas should receive a certain percentage of the earnings of all of the railroads regardless of the amount of traffic actually carried. If one railroad under the pool arrangement should receive 5 per cent of the total earnings of all railroads, and if it actually carried over its line 8 per cent of the total earnings, it was obliged to give up 3 per cent, or all in excess of the 5 per cent to which it was entitled. On the other hand, if the same road earned only 3 per cent, it collected from the pool from funds paid in by others who carried in excess of their proportion, the additional 2 per cent. Under those conditions there was no incentive for one railroad to pay a rebate or reduce the charge or make any special effort to secure the traffic over its own line. Therefore, when the pooling of freight was prohibited, the temptation for the payment of rebates was restored. The same act of 1887 prohibited what are known as rebates; that is, by means of refunds to certain shippers, giving such shippers in effect a reduced rate as compared with the amount paid by other shippers, but through the pressure brought to bear by the shippers and the eagerness of each traffic official to make a good showing for his road, and thus retain his position and make himself eligible for advancement, the payment of rebates became quite prevalent. This was all stopped by the Hepburn Act, which was passed in June, 1906, and became effective in August, 1906. Under the Hepburn Act the Interstate Commerce Commission was authorized to employ inspectors to examine the books and accounts of railroads, and that provision effectively stopped the payment of rebates, because if any such payments were made, they would be disclosed by an examination of the books and records.

Naturally, the accounting requirements became more burdensome after the passage of the Hepburn Act. It so happened that on the very day that act was passed by Congress, the Association of American Railway Accounting Officers was in session at Bluff Point, N. Y. It also happened that just prior to that time a committee of twenty-five was created by the Ac-

counting Officers' Association, to take up questions in so-called higher accounting; the committees prior to that considered only freight, passenger and disbursement accounts. The Accounting Officers voted immediately to offer the services of this new committee to the Interstate Commerce Commission in connection with the formulation of the new system of accounts required under the Hepburn Act.

Mr. Henry C. Adams, at that time in charge of statistics and accounts for the Interstate Commerce Commission, was in the annual meeting at Bluff Point, N. Y., and assured the Association of Accounting Officers that the services of this newly created committee would be heartily welcomed. From that time to the present time this Committee of Twenty-five, of which the writer of this paper has been continuously a member with the exception of one year, in which, by his urgent request, his name was dropped from the committee,—has been meeting with Mr. Adams and his successors, anywhere from four to twelve times a year. As hereinbefore stated, Mr. Adams had been meeting with the Accounting Officers of railroads in their annual conventions for many years prior to the Hepburn Act, and the wisdom of the accounting officers in promoting that relationship was confirmed by the way in which Mr. Adams took them into his confidence when he started to formulate the new scheme of accounts to be promulgated by the Interstate Commerce Commission.

At the first meeting of the Committee of Twenty-five, Mr. Adams frankly laid his plans before the committee, stating that he had been importuned by many accountants,—both expert and *so-called* expert, seeking employment with him in the production of a system of railroad accounts. However, he stated that he had no idea of turning the matter over to them, but that from his association with the Railway Accounting Officers he believed he could secure the most valuable assistance from this Committee of Twenty-five Chief Accounting Officers of Railroads. Those twenty-five men were representing mostly the

largest railroads in the country. As I recall, there was something like 60 per cent of the railroad mileage of the country represented. He had learned that there were different methods of accounting in vogue by the different railroads; he had heard the merits of these different methods presented in the annual conventions. He stated it was his idea that the system of accounts to be promulgated by the Interstate Commerce Commission should be what he would call the best American practice; that is, it would be his idea to select what would eventually be termed the best practice for classifying each item, and adopt that as the standard to be embodied in the accounting orders by the Interstate Commerce Commission. He was more or less familiar with the methods of handling accounts of railways in Europe, but he did not undertake to import any European ideas into his plan.

With the best American practice as a platform, he sat down with the Committee of Twenty-five to go over the entire scheme of accounts, item by item. Of course, I believed that he would adopt the Rock Island classification as being the best American practice. There were twenty-four other gentlemen on the committee who had similar ideas. However, we discussed the merits of the various ideas,—Mr. Adams sometimes participating in the discussions, but more frequently sitting by as a careful listener, with one or two stenographers taking notes all the while, so that the salient points in the discussions might be preserved, and reserving to himself the final judgment as to what method to adopt. In that way, Mr. Adams proceeded to formulate a scheme of accounts which is now observed by all railroads in the United States, and which I believe does really represent, as a whole, the best American practice.

One point was urged by the Railway Accounting Officers from the beginning and through all of our conferences down to the present time; namely, that the Interstate Commerce Commission would promulgate the principles, requirements and classifications without prescribing special forms of ab-

stracts, reports, waybills, vouchers, pay rolls, etc., etc. The Accounting Officers assured him that if he would restrict his accounting scheme to classifications of the items included in each account, we would observe his requirements and principles to the letter and give him the results expressed in figures which would be compiled with painstaking accuracy. We wished to be left free to have some initiative of our own with regard to the method of the detailed compilation from the original record up to the final figures that are reported to the Interstate Commerce Commission. We urged that the differences in the organization of different companies, and the differences in local conditions, were such as to cause diversity in detailed practices, and that the Railway Accounting Officers should be left free to prescribe such detailed methods for the individual railroads on the assurance that the final results reported to the Interstate Commerce Commission would be a strict and accurate compliance with the classifications of accounts ordered.

We were fortunate in having a broadminded, far-seeing man like Mr. Adams to deal with at that time; one less astute might have insisted upon prescribing detailed forms and methods of compilations for the various railroads, deluding himself with the idea that only in that way could uniformity of results be produced. Furthermore, we explained that with the rapid introduction of computing machines, our methods of detailed compilation were bound to change frequently, and if we found we could handle a certain piece of work more economically by introducing machines, we did not want to have such economy delayed by waiting for an order from the Interstate Commerce Commission. Also, that the organization on one railroad might be such that the use of certain machines would produce substantial economy, while on another railroad, due to a different organization, the same machines might not produce any economy at all, but might possibly increase the expense. Larger roads could make use of many accounting machines and we did not

wish to have methods prescribed which might preclude or defer their use. Speaking of accounting machines, I am reminded that some years ago that grand Santa Fe statistician, Mr. James Peabody, recently called to his heavenly reward, and myself were walking through the Skirvin Hotel in Oklahoma City, when a native Oklahoman, who knew us by sight, said, "There go them, two railroad addin' machines."

Be it said to the credit of Mr. Adams and his successors, that up to the present time, the wishes of the Accounting Officers with regard to being left free to prescribe the details of compilations of the classifications of accounts on the individual railroads, have been respected to the profit of the railroads and also to the profit of the Interstate Commerce Commission. Now, I have felt that it was advisable to take this much of your time to let you on the inside a little bit as to how these accounts came into being. I do not think that that situation is generally understood and in the rest of the paper I will try to get down to the problems.

The first classification that was undertaken by Mr. Adams and the committee was that of operating expenses. In connection with that classification, it was also necessary to consider at the same time the classification of expenditures for road and equipment, or in other words, the expenditures for capital account. After the classification of operating expenses came, necessarily, a classification of operating revenues. Prior to that time the term "gross earnings" had been used to designate what are now called operating revenues. Some of us still use that term, and I should like to put in a plea right here that we use the official term "revenues," and from what immediately follows I think you will appreciate the importance of it. The Accounting Officers were almost unanimously opposed to the continuation of the use of the term "earnings" as applied to gross receipts, because the term "earnings" created an erroneous impression. In connection with banking and many classes of business, the term "earnings" refers to what is left after the ex-

penses and cost of maintenance have been deducted from the gross receipts, while with railroads, the term "earnings" had been applied to the gross receipts. If the earnings of Railroad "A" for example were referred to in the public press as $75,000,000, the impression was created that that large sum of money represented profits available for dividends; but when the operating expenses, taxes, rentals and interest were deducted therefrom, which ordinarily would leave about $5,000,000, the figure thus left would be the one that would generally be called earnings in banking and commercial business. Many of us were in favor of using the word "receipts," and the word "revenues" was finally adopted as a sort of compromise between "earnings" on the one hand and "receipts" on the other.

As to operating expenses, the first subdivision which naturally came before the committee in joint conference with Mr. Adams, was that of Maintenance of Way and Structures, and under this subdivision is included a very large portion of the items which require consideration of capital expenditures in connection with the cost of maintanance. Prior to July 1, 1907, the Interstate Commerce Commission prescribed a classification of operating expenses, showing how the items that were put into operating expenses should be classified; but that classification made little or no attempt to prescribe what items should be included therein; as, for example, under the old classification, many railroads charged the entire cost of all ballast, all new rails, all additional side tracks, all new bridges with the exception of very large steel bridges, and many other items, to operating expenses, while other railroads charged to operating expenses only the cost to renew bridges in kind, and as to rails, charged the increased weight of rails, and as to side tracks charged the cost of all additional side tracks to capital account. In other words, it was found that quite a few railroads had taken the advanced step of drawing the line between operating expenses and capital account in connection with the renewal of existing structures and facilities. Many heated arguments were

indulged in on this question of the division of expense of renewals of existing structures between additions and betterments, and operating expenses. Those arguments were between the accounting officers themselves; Mr. Adams got the benefit of them. On the one hand, certain accounting officers,—largely those that had followed that practice, maintained that when a steel bridge was erected to replace a wooden structure there was a distinct betterment to the property, which should be recognized by an appropriate charge to the capital account. On the other hand, those who had been following a different practice argued from their convictions just as conscientiously as the others, that the substitution of steel bridges for wooden bridges was required by the progress of the art of railroading; that the substitution of heavier rails for lighter rails was also a requirement of such progress, and that the entire cost of such renewals with improved structures and facilities, should be charged to operating expenses, so that the operating expenses of a railroad when stated, would include the entire cost of keeping the property up to date. These accountants pointed to the railways of England which years ago adopted the practice of charging large sums to additions and betterments, represented by improved facilities and structures, such as increased weight of rails, etc., and the result of such practice is that their capitalization is now $250,000 to $275,000 per mile of road. They claimed that such a policy would lead to the over-capitalization of the railroads in the United States. They claimed that the plan of charging the full amount of these improvements necessary to keep up with the progress of the art of railroading was a conservative practice and would be commended by business men as a sound method. On the other hand, the others claimed that any additions or betterments to property should be represented in the capital account so that the books of the company would show the true investment in the property and also the true net income from operation. Mr. Adams decided, as you gentlemen all know, to adopt the plan by which each addi-

tion and betterment expenditure is charged to the capital account. Subsequently a classification showing such items, which are chargeable to additions and betterments, was ordered by the Interstate Commerce Commission.

However, Mr. Adams injected into his scheme of accounts, an option to charge to operating expenses, small items costing less than $200 which would theoretically be chargeable to additions and betterments,—the object being to relieve the property account from the multitude of small expenditures which, in theory, would be proper charges to the capital account but which, as a practical proposition, should be eliminated therefrom. Certain exceptions were made to this minimum charge, such as tracks, additional land, etc. This minimum rule prevailed until after the federal valuation bureau was created, which bureau finally requested that that option be withdrawn and all additions and betterments regardless of the amount of expenditure, charged to capital account. Since then the federal valuation bureau has thought better of the matter and it is now believed that they are anxious to have this rule modified because the present rule is putting into the records of the valuation bureau a multitude of details covering these small expenditures. Some of the difficulties which come up in connection with these small items, will be apparent when they are mentioned; as, for example, under the rules as they exist today, which provide that every expenditure for an addition or betterment to the property, however small, must be charged to the capital account, we are required to charge, for illustration, the cost of a new shelf which is added to an office on which to place files. The cost of that shelf may be 37 cents for labor and material. In the course of a year or two that shelf is knocked out to make room for something else, or because it is in the way, but when it is taken down, the chances are about 10 to 1 no one will remember that its cost should be written out of property account. Such a proceeding involves the process of making what some roads call an "authority for

expenditure" which must go the rounds of approval and be recorded in the regular manner in order to get a 37-cent item out of the property account. It being so small, however, as I said before, the chances are at least 10 to 1 that some one will take a hammer and knock the shelf out, pull the nails and that will be the end of it. A stationery case may be put in its place, costing say $6.00 for labor and material. Then in the course of two or three years it is decided to store the stationery supplies some place else; another receptacle is provided, its cost charged to capital account and the old stationery case will be torn out. At that time, it is very likely that no one will think about issuing the necessary document which will write the cost of the old stationery case out of the capital account. In fact, a strict application of the present rules will lead in many cases to very ridiculous situations. Each such small item affecting capital account must be reported in detail to the Interstate Commerce Commission. It is believed that the Interstate Commerce Commission in the near future will modify its orders and will probably make a mandatory order requiring all items under a certain minimum, which minimum will perhaps not exceed $100, to be charged to operating expenses, even though theoretically the expenditure should be charged to additions and betterments. Please do not draw the inference that the writer of this paper claims to have inside information as to what the Commission will do. In a certain rate case I succeeded in getting into the record a guess as to what the I. C. C. would do, and a proxy friend of mine wrote the I. C. C. complaining of the "leak." We have heard about "leaks," recently. I received a letter from the I. C. C. stating that the thing complained of was similar to what Mark Twain said about his own obituary written by a friend who was misinformed that he was dead,—"Greatly exaggerated."

The accounting officers will generally welcome some such change, and I believe the operating officers will also. While the change would mean slight additional charges to operating ex-

penses, yet the amounts involved will not be large, and it will prevent the necessity of keeping track of the details of innumerable small transactions, and also prevent the carrying into our property account of a lot of little items which will never be written out when they actually disappear from the property. On the other hand, some accounting officers still favor the present rule, and a very prominent accounting officer, who has written much on the subject of railroad accounts, goes so far as to state that if a right of way board fence is constructed with one nail in each board to each post, and if later the fence is gone over and an additional nail put into each board at each post, the cost of each such additional nail and the application thereof should be added to the capital account. That was written some time ago, before we had so many wire fences. Theoretically, he is right, but in the interest of accuracy in the final statement of our property account, and for the purpose of reducing headaches for both the operating and accounting department employes of the railroad company, he is wrong Knowing that it will be impossible to have an option of any kind restored, we should have an order of the Interstate Commerce Commission requiring that all expenditures for additions and betterments, involving less than $100 in any one instance. shall be charged to operating expenses.

One of the matters in which you gentlemen are largely interested, and which provoked a lot of discussion in the meetings of the Committee of Twenty-five and with Mr. Adams, was the matter of depreciation. At the start, Mr. Adams had in his mind pretty thoroughly, that an adequate charge should be made against the current operations of the carriers, and be included in their operating expense accounts for depreciation of all property, including both fixed property and equipment. He contended that depreciation was going on from year to year, and that the operations for each year should stand their share of the depreciation, and unless such depreciation charge was made, the income account of the company was not correctly

stated. Some of the members of the committee agreed with Mr. Adams, but the majority did not. As to the fixed property, a large majority of the committee contended that if the work of maintenance was kept up to the proper standard, there was no depreciation running from year to year; or, in other words, that the fixed property was permanent, and what depreciation there was, if any, depended upon the standard of maintenance that was adopted by the individual carrier. It was claimed that the road bed, from year to year as it solidified and seasoned, improved rather than depreciated, aside from the erosion on the sides of the embankments and cuts, which become the subject of maintenance expenditures from time to time. A goodly number of the committee contended that a similar condition obtained with regard to equipment, and it was stated in the committee that unless conditions changed which demanded a different type of locomotive, the various parts of a locomotive could be renewed from time to time until finally there would be nothing left of the original locomotive but the number. Yet if all these renewals were charged to operating expenses as they went along, the locomotive would be maintained. On the other hand, it was found that the size, capacity, and in many cases the type of equipment had been subject to frequent changes in the past, and that the depreciation due to obsolescence, was a real factor to be reckoned with.

The final outcome of all this controversy was that the representatives of the Interstate Commerce Commission agreed that if the committee would not seriously oppose the accounts covering depreciation on rolling stock, the matter of depreciation on fixed property would be waived, and so the first classification of operating expenses provided for depreciation of equipment, but omitted depreciation on fixed property. The last classification promulgated, which became effective July 1, 1914, contains permissive provisions for depreciation on fixed property; that is to say, the carriers now may, if they so elect, make charges against maintenance of way and structure accounts for

depreciation of fixed property. So far as my knowledge goes, very few, if any, railroads are making any charges to operating expenses for depreciation on fixed property.

In promulgating the classification which provides for depreciation on rolling stock, no fixed percentages were ordered by the Interstate Commerce Commission, but the matter of percentage was left to the carriers. The result was anything but uniformity, because the carriers charged varying percentages from nothing up to 6 per cent.; usually, according to the prosperity of the company. One small railroad, which produced an annual deficit of nearly $1,000,000, made no charges whatever to depreciation on equipment, while another railroad which was quite prosperous, charged to depreciation of equipment 6 per cent. per annum. In the old copy books, when we were boys, many of us learned penmanship by copying the old saying—"Many men of many minds," and in connection with this depreciation on equipment, there were certainly many minds because nearly all the rates and fractions thereof, between nothing and 6 per cent. were used; that is to say, some roads charged ¼ of 1 per cent.; some ½ of 1 per cent.; some ¾; some 1 per cent.; some 1¼ per cent., and so on, up to 6 per cent. On the other hand, it should be remembered that the Interstate Commerce Commission also included in the classification of operating expenses, what are known as the renewal accounts under the head of Maintenance of Equipment. These renewal accounts took up the slack, so to speak, because to those accounts, when a car is destroyed, must be charged the difference between the original cost of the car on the one hand, and on the other, the sum of the salvage and the amount which had been previously charged to the regular depreciation account. To illustrate: If a car is destroyed which is 20 years old, the rules require that the original cost thereof, which we will say was $800, shall be credited to the property account, and charged as follows: Supposing $100 salvage, and $700 net loss. The $100 goes to the material account and of the $700, so much

as has already been credited to the depreciation account and charged to operating expenses in the regular depreciation charge shall be charged to the depreciation reserve, and the remainder shall be charged to renewal account under operating expenses. If a road has charged nothing to depreciation during the 20 years of the life of the car, it has no credit reserve set up, and therefore, must charge the full $700 to operating expenses under the renewal account. If a road has charged ¼ of 1 per cent. for the 20 years, it will have 5 per cent. of the depreciable value of the car, or 5 per cent. of $700 or $35.00 in the depreciation fund, and it will charge $35.00 to the depreciation reserve and $665.00 to operating expenses under the renewal account. If the road has been charging 5 per cent. per annum for depreciation, it will have the full $700 set up in its depreciation reserve account and will charge the $700 to that account, and nothing to operating expenses under the head of renewals. So you see the road that charges the small rate of depreciation simply puts off the evil day, because in the end, the difference between the salvage and the original cost of the car must go to operating expenses, either under the depreciation account currently, or under the head of the renewal account when the car is destroyed.

It may be interesting to you to know that a few months ago the Interstate Commerce Commission sent out special circulars calling for data concerning the depreciation charge, including among other things, the rate at which depreciation is computed. Some roads have been called upon to justify the rates which they charge, and those roads which have been so called upon, have been charging less than 2 per cent. per annum. This would lead one to believe that while the Commission is not yet ready to promulgate a uniform rate for all railroads, yet it has progressed far enough in the study of this subject to believe that anything less than 2 per cent. is inadequate. The Commission would have saved itself much embarrassment if it had deferred the ordering of depreciation until it had studied the subject sufficiently to be able to order a minimum and maximum rate.

With a minimum and maximum rate, of course, there would not be exact uniformity, but the range between the minimum and maximum would not be so wide as the range between nothing and 6 per cent.

Reference has hereinbefore been made to the difference of opinions regarding the proper treatment in the accounts of the cost of replacing existing structures with improved ones. Some thought that the entire cost of the new improved structure, as, for example, a steel bridge substituted for a pile structure, should all be charged to operating expenses; others thought that the excess over the cost to renew in kind, should be charged to additions and betterments, and still others thought that the excess over the original cost should be charged to additions and betterments. The Interstate Commerce Commission at first ordered the second plan; namely, that the cost in excess of the cost to renew in kind, should be charged to additions and betterments, but in the latest classifications, that is changed so that now the cost in excess of the original cost is chargeable to additions and betterments. The fallacy of the first order, viz., to charge to additions and betterments, the excess over the cost to renew in kind, may be illustrated by the following example: Suppose a pile structure which originally cost $5,000 is renewed with a steel bridge the total cost of which was $25,000; suppose that since the original pile bridge was built, the prices of labor and material had risen, so that when the steel bridge was erected it would have cost $10,000 to renew the pile bridge in kind. There was included in the original capital account, $5,000,—being the original cost of the construction of this pile bridge. Now, the new steel bridge cost $25,000 and the cost to renew in kind is $10,000, so that the excess of $15,000 is charged to property account, making a total charge of $20,000 to the property account for this steel bridge. Now suppose that this road constructs a new line, requiring a steel bridge of exactly the same size, and spends $25,000 therefor, there would be found in the property account of this new road, $25,000 therefor, as the cost

of this identical bridge erected at the same time as the other one, although in the property account there is only $20,000 for the steel bridge which was erected to replace the pile bridge. This defect has been eliminated in the classification effective July 1, 1914, and which is now in effect, because at the present time, in the case of the renewal referred to, the excess over the original cost, or $20,000, would be charged to capital account in connection with the erection of the steel bridge costing $25,000, so that the result would be to charge the total cost of the new steel bridge, viz., $25,000, to the capital account. The same principle applies in renewals of wooden bridges with brick or stone structures, and all other renewals of existing structures with improved structures.

One item which many think is a proper charge to capital account in connection with renewals, has been omitted; namely, the substitution of treated ties for untreated ties. The treatment of ties by the various processes as well as the treatment of bridge timbers, lengthens the life of such ties and timber, and undoubtedly produces improved ties and timbers. However, the Interstate Commerce Commission requires the entire cost of ties, both plain and treated, to be charged to operating expenses. Some years ago when the muck-raking articles were being written about railroads, Everybody's Magazine published one of those articles in which the Rock Island was accused of misrepresenting its maintenance cost by charging the entire cost of treated ties to operating expenses, whereas a considerable portion of that cost should have been charged against the capital account. The article was of the character of many of those published at that time, condemning in severe terms both the honesty and ability of the Rock Island officials. The writer of this paper wrote to Everybody's Magazine at that time, calling attention to several mis-statements, and misconceptions by the writer of the article, explaining that the rules of the Interstate Commerce Commission which were the law of the land, required that the entire cost of treated ties be charged to operating

expenses. Attention was also drawn to the fact that while the writer of the article implied that he would like to see a higher moral standard among the Rock Island officials, yet in this case, he was deliberately advising us to violate the law of the land. Everybody's Magazine was asked to publish a correction of these erroneous and misleading statements, but such correction was never published, and it took four letters, addressed to the editor of the magazine to secure any response whatever, and then only through a mutual friend was an acknowledgment made. Prior to that time I had been a reader of Everybody's, but since then I have not read it, because the officials of that magazine showed plainly that they had no hesitation in carelessly villifying a man, and that they would not retract or correct an error when it was pointed out to them. There is an element of betterment in the treated ties, but no one knows how to measure it. The latest classification, however, provided that the cost of metal ties when substituted for wooden ties over the cost of the wooden ties removed, shall be charged to capital account.

Another important feature in connection with the early classifications under the Hepburn Act was that the first classification of Additions and Betterments, as many of you may know, was on what we called a "commodity" basis; that is to say, it was entirely different from the classification of construction expenditures. It classified such expenditures under such heads as main tracks, sidings and spur tracks, terminal yards, including under those headings all the rails, ties, grading, ballast, fastenings, etc. It was impossible to add the additions and betterments classification in that shape, item by item, to the construction classification without re-classifying the items. Therefore, we were practically compelled to keep two classifications of additions and betterments. However, in the revised classification effective July 1, 1914, this has been changed and now the classification for additions and betterments is the same as the classification for construction of road.

Some small items engaged a lot of the attention of the committee in the early days, one of which comes to my mind,—that of loss and damage to company material. The Committee of Twenty-five was almost evenly divided, probably reflecting former practices, about one-half claiming that when company material was lost or damaged in transit, the cost of such loss or damage should be charged to the purpose for which it was intended; that is to say, if a lot of ties were destroyed in transit by fire, the cost of those ties would be charged to ties just the same as if they had been put in the track; if a lot of window glass intended for windows in coaches was smashed en route, the cost thereof was to be charged to repairs to passenger cars just the same as if it had actually been put in the coaches. About half of the committee thought that loss and damage to company material should be treated the same as loss and damage to commercial freight; that such loss and damage so far as operations were concerned, should not be distinguished from loss and damage to commercial freight. Very often the same mistake or the same accident would damage both commercial and company freight, and it was the claim that the cost of the glass, for example, that was intended for the coaches, and which was smashed, should be charged to loss and damage-freight, and not to repairs to passenger cars; that the cost of the ties which were burned up in transit before they were put in track, should be charged to loss and damage-freight and not to ties, under the head of maintenance of way and structures. The final vote of the committee was a majority of one in favor of charging such losses to loss and damage-freight. The Interstate Commerce Commission's representatives saw it in the same way, and it was so ordered in the classification which was promulgated.

An important principle recognized in the Interstate Commerce Commission accounts is that the charges to operating expenses should be based on accruals. In former years it will be remembered that most of the railway accounts were kept according to the month in which the various vouchers and bills

were audited, regardless of when the expense accrued. Some times controversies will arise about certain payments and no vouchers are made for a long period until the controversy is settled. In such cases, a large sum was put into operating expenses in the month in which the vouchers were audited, thus distorting the showing for that month. However, for years, some roads had been in the habit of accruing charges to operating expenses by estimating from previous experience the amounts that would be due each month on various accounts when the actual figures were not available; that is to say, if company "A," for example, used the tracks of company "B" and became indebted to company "B" regularly each month for a certain fixed sum, say $5,000 monthly, and if the vouchers therefor, were held up owing to a dispute, the accounting officer of company "A" would charge the proper operating expense account each month with $5,000 and set aside that amount as a reserve to take care of the vouchers when finally approved and audited. When the settlement was finally reached, there would be a difference between the estimated charge and the actual amount finally determined, and that difference, whether a debit or credit, would be adjusted when determined. This is a great improvement over the old plan of waiting perhaps for two years until the controversy was ended, and then have $120,000 to charge out all in one month. The Interstate Commerce Commission recognized the principle of accruing or estimating these charges in advance when the regular bills and vouchers were not rendered or audited, and in a meeting held within the last year, Mr. Sweney, now in charge of accounts for the Interstate Commerce Commission, stated that he did not suppose there was any well-regulated railroad in the United States that does not now keep its accounts on the basis of accruals, thus indicating that he thought they were not correctly kept unless on the accrual basis.

Another point which has caused much controversy in connection with these classifications is the matter of abandoned prop-

erty. The classification provides that when property is retired and replaced, the original cost thereof less salvage, shall be charged to operating expenses. This means that if a road makes a cut-off abandoning part of the curve and shortening the line, the original cost of the old road, less the salvage, shall be charged to operating expenses. This ruling was contested by the Kansas City Southern Railway, which, in changing its line some years ago, did actually abandon many portions of curves. They left the cost of the old property in the property account, where many railroad accounting officers and executives think it should remain, and the Interstate Commerce Commission brought action against the road to compel it to charge off the original cost of such abandoned roads. The decision was against the railroad, and it has had to make the charges as required by the classification. Such a rule, however, brings about this situation: If it is decided to reduce the grade of a line by by cutting down the humps and filling in the low places in the track, doing the work on the old right of way, the entire cost of reducing the grade is chargeable, under this rule, to the capital account. However, if it is decided to reduce the grade by abandoning a certain portion of the line and constructing a new line entirely, the effect of charging the cost of the abandoned line to operating expenses means that a very large portion of the cost of reducing the grade in that way is chargeable to operating expenses. In other words, if the work is done vertically, the charge is to capital account; if it is done laterally, the charge is to operating expenses. On a certain railroad it so happened that a reduction in grade was contemplated on the original right of way, and bids were asked from contractors to do the work. One of the contractors conceived the idea of reducing the grade by abandoning the old line and constructing a new line, and showed that the cost thereof would be substantially less; the saving was about $750,000. Suppose that the total cost if done on the old right of way was $3,000,000 and if done by abandoning the old line and constructing a new line,

the cost would be $2,250,000. Suppose the original cost less salvage of the line thus abandoned was $2,250,000. If the work is done on the old line or vertically, the entire cost of $3,000,000 would be chargeable to capital account. If performed by abandoning the old line and constructing a new line or laterally, the total cost would be chargeable to operating expenses. It was pointed out to the Commission in the Kansas City Southern case that when a line is projected, several surveys are made and all of them are abandoned but one; that a line is never completely finished; as time progresses and the railroads progress, changes are made, and the accounts promulgated by the Interstate Commerce Commission should not cause such discrepancies as have been illustrated herein. The abandoned line is analogous to the temporary survey that was abandoned, and is a part of the legitimate cost of the completed line. However, the Commission has not conceded that view, and it is only fair to state many railroads agree with the Commission.

In this paper not all problems are mentioned, and perhaps not the most important. You may now be thinking of problems which ought to have been referred to. Whenever I try to write a paper or attempt to make a speech I nearly always find afterwards that I have neglected to say that which I should have said and often have said things that had better have been left unsaid.

I have said that the representatives of the Interstate Commerce Commission proposed to incorporate in their classifications of railway accounts, the best American practice. I feel sure that is the case, because it is plain to me that the Interstate Commerce Commission copied largely from the Rock Island scheme of accounts. I have no doubt that each of the other members of the Committee of Twenty-five who were privileged to advise with the representatives of the Interstate Commerce Commission in their labors, will agree with me so far as the best American practice is concerned, because I have evidence

that each one of them feels just as certain as I do, that their own individual classifications were largely copied by the Interstate Commerce Commission. What a pleasant feeling that produces in our breasts, and you gentlemen would not have any of us disillusioned.

On Tuesday evening, January 9th, I had the pleasure of listening to an intensely interesting and instructive talk by Mr. L. M. Allen, Passenger Traffic Manager of the Rock Island, on the subject—"Co-operation." Like everything else which Mr. Allen undertakes, his address was a complete success. His hearers learned how easy, and at the same time how important it is that every last one of us should co-operate to boost the passenger traffic of the Rock Island. Mr. Allen is a man who also exhibits toward the other departments, the same co-operative spirit which he asks for his department.

In conclusion I wish to emphasize the importance of co-operation between the accounting department and the operating department of a railroad, in order to produce accurate statements of results from operation.

You men in the operating department originate the records from which the accounts are compiled. On some railroads a substantial part of this compilation is performed by clerks in the offices of the operating department while on others, the majority of the compilations are performed under the direct supervision of the accounting department. No matter which plan is used, attention is called to the fact that the closest co-operation and understanding should prevail. In short, the operating department and the accounting department should be like a pair of twins,—Siamese twins, for example; namely, inseparable. I know it has been fashionable for the accounting officers and clerks to find fault with the operating officers and clerks for incomplete, inaccurate and delayed information, and on the other hand, it has been about as fashionable for the operating officers and clerks to find fault with the technical requirements of the accounting department. When each under-

stands the other, the fault-finding ceases. We must realize that we are playing a great big game; at an expenditure of hundreds of millions of dollars the railroad plant and equipment are furnished. To have charge of the operations and the finances of such magnitude involves an immense responsibility. Necessarily the organization by departments must be absolutely complete and more or less complicated. All departments must co-operate or failure will result. In a baseball game each one has his part to play; the success depends on team work. If, in order to thrill the grand stand, the pitcher erroneously attempts to play third base, the runner is often safe, perhaps reaches home, and the game is lost. If the third baseman is constantly finding fault with the catcher, it interferes with his efficiency, and when right field makes a long throw home, the catcher misses the ball, lets the man in safe and the game is lost. This railroad game is far more important than any baseball game, but the same team work spirit must be there. The operating department has its position to play, the accounting department has its position to play, and there are the other positions to be played. As the baseball players back each other up, so that in case a ball is missed by the first man, the second one gets it,—so the accounting and operating departments should back each other up, to the end that the game may be won. And what is the winning of the game? In baseball it is not measured by the number of motions the pitcher makes before he delivers the ball, or the number of bases stolen, or the number of home runs and hits by any particular man, or the number of put outs by any particular man; it is measured away out on the bulletin board at the back of the field by the number of runs made. So the score of the railroad game is measured by the figures at the bottom of the income account, which show the final balance of income left after all obligations are provided for. The railroad score is not measured by the number of trains run, not by the number of cars repaired, not by the amount of the pay roll, not by the number of vouchers audited, not by the number of

tons per car, not by the number of statements made; but a combination of all together, each one doing his own part efficiently, always looking out for a chance to assist the others, playing the game every minute,—produces that final score or balance of income, and the more co-operation and more assistance each department of a railroad renders the other, the larger is the score represented by the balance of income.

Oh! I realize that I am not saying anything new; you all know this as well as I, but we need to have these things repeated, and if through any suggestion I have been able to bring forward tonight in any part of this paper, the result will be that you and I, when we take our places on the railroad diamond tomorrow morning, will play the game with a little more "pep" and with the co-operative spirit slightly improved, then this paper shall not have been written in vain.